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STAFF RECOMMENDATION

ON CONSISTENCY DETERMINATION

Consistency Determination No.	**CD-12-00**
Staff:	MPD-SF
File Date:	1/28/2000
45th Day:	3/13/2000
60th Day:	3/28/2000
Commission Meeting:	3/14/2000

FEDERAL AGENCY: **Environmental Protection Agency**

PROJECT LOCATION: Morro Bay, San Luis Obispo County (Exhibits 1-3)

PROJECT DESCRIPTION: National Estuary Program Comprehensive Conservation Management Plan (Exhibits 4-9)

SUBSTANTIVE FILE DOCUMENTS: See page 11.

EXECUTIVE SUMMARY

The Environmental Protection Agency (EPA) has submitted a consistency determination for the Morro Bay National Estuary Program (MBNEP) Comprehensive Conservation and Management Plan. This Plan is a comprehensive program addressing habitat and water quality concerns in the Morro Bay watershed.

The Plan designates the following six issues as top priority concerns: sedimentation, bacterial contamination, nutrient enrichment and dissolved oxygen, heavy metals and toxics, freshwater flow, and habitat loss. The water quality measures cover both point and non-point sources of pollution, with action items proposed to help maintain and restore the estuary. The Plan further identifies the primary causes for the identified problems, and proceeds to recommend 67 actions (Exhibit 6) to address them. Some of the actions build on past efforts, and some constitute new approaches. The plan identifies the ideal implementation strategy for each proposed action. Implementation will occur through a wide variety of activities and by a broad spectrum of federal, state, and local agencies and citizen group. As the plan states, the actions are "both a blueprint for and a call to action." The plan serves as a model for comprehensive

watershed resource planning and protection, and its implementation would significantly benefit the estuary and is consistent with the fundamental goals of the Coastal Act. The Plan would protect, and restore, where feasible environmentally sensitive habitat, water quality, wetlands, rare, threatened and endangered species, and marine resources. The Plan would also protect and support commercial and recreational fishing. Thus, the plan is consistent with the applicable policies (Sections 30210-30214, 30230-30233, 30234, 30234.5, and 30240) of the Coastal Act.

STAFF SUMMARY AND RECOMMENDATION

I. Background/Project Description. The Environmental Protection Agency (EPA) has submitted a consistency determination for a comprehensive watershed management plan for Morro Bay. The plan was established under the auspices of the National Estuary Program (NEP), which itself was established under the Clean Water Act for the purpose of pioneering a broader focus for coastal protection, and demonstrating practical, innovative approaches for safeguarding coastal areas and their living resources. The NEP currently includes 28 major estuaries and coastal water bodies nationwide. The intent of the NEP was to identify nationally significant estuaries threatened by pollution, development, or overuse and to promote the preparation of comprehensive management plans to ensure their ecological integrity. One purpose of National Estuary Programs is to develop of plans to coordinate implementation by local, state and federal agencies of Comprehensive Conservation Management Plans.[1]

Morro Bay was accepted into the National Estuary Program in 1995. Under the NEP, the Morro Bay program established an Executive Conference and various subcommittees, working with abroad spectrum of public agencies (federal, state and local), as well as interest groups and private citizens (Exhibit 7). After several years of effort, the program published a Draft Comprehensive Conservation Management Plan in August 1999.

The plan states that the purposes of the Morro Bay NEP include an emphasis on characterization and trend detection in its statement of seven purposes and objectives:

> *1) Assess trends in the estuary's water quality, natural resources, and uses of the estuary;*
>
> *2) Collect, characterize and assess data on toxics, nutrients, and natural resources within the estuarine zone to identify the causes of environmental problems;*
>
> *3) Assess pollutant loadings in the Estuary and relate them to observed and potential changes in uses of the estuarine zone, water quality and natural resources;*

[1] To avoid confusion caused by the fact that "CCMP" can refer both to the "California Coastal Management Program" and the "Comprehensive Conservation and Management Plan," any references in this report to the acronym “CCMP” will mean the California Coastal Management Program.

4) Develop a comprehensive conservation and management plan that recommends priority corrective actions and implementation schedule addressing point and nonpoint sources of pollution to restore and maintain the chemical, physical, and biological integrity of the estuary, including restoration and maintenance of water quality, a balanced indigenous population of shellfish, fish, and wildlife, and recreational activities in the estuary, and assure that the designated uses of the estuary are protected.

5) Develop plans for the coordinated implementation of the plan by the states as well as federal and local agencies participating in the conference;

6) Monitor the effectiveness of actions taken pursuant to the Plan;

7) Ensure that federal assistance and development projects (per Executive Order 12372, September 17, 1983) are consistent with the Management Plan, meet the requirements of CWA Section 320(b)(7) and further the goals of the Plan.

In addition, the Morro Bay NEP has adopted broad goals for protecting and enhancing the resources of the bay and watershed, which are to:

1) Slow the process of bay sedimentation through implementation of management measures which address erosion and sediment transport.

2) Reestablish healthy steelhead trout habitat in Chorro and Los Osos creeks through measures including reduction of sediment loading in gravels, stabilization of riparian corridors, removal or mitigation of migration barriers, improvement of water quality, and restoration and maintenance of adequate fresh water flow.

3) Ensure that bay water remains of sufficient quality to support a viable commercial shellfish mariculture industry, safe recreational uses, healthy eelgrass beds, and thriving fish and shellfish populations.

4) Ensure the integrity of the broad diversity of natural habitats and associated native wildlife species in the bay and watershed.

5) Maintain watershed functional integrity through appropriate riparian corridor management, impervious surface management, fire management, and grazing management.

6) Protect social, economic, and environmental benefits provided by the bay and watershed through comprehensive resource management planning.

7) Promote public awareness and involvement in estuarine management issues through outreach, educational programs, and the use of volunteers in ongoing bay monitoring and other programs.

Finally, in the "heart" of the Plan are 67 recommended actions designed to accomplish these goals (summarized in Exhibit 6), including a detailed discussion of implementation for each action, with timeframes, implementation strategies, cost, funding sources, monitoring and evaluation (Exhibits 5 & 9), progress made to date as of August 1999 (Exhibit 8), and related information. Several representative samples of these more detailed discussions are attached as Exhibit 9.

II. Status of Local Coastal Program. The standard of review for federal consistency determinations is the policies of Chapter 3 of the Coastal Act, and not the Local Coastal Program (LCP) of the affected area. If the LCP has been certified by the Commission and incorporated into the California Coastal Management Program (CCMP), it can provide guidance in applying Chapter 3 policies in light of local circumstances. If the LCP has not been incorporated into the CCMP, it cannot be used to guide the Commission's decision, but it can be used as background information. The San Luis Obispo County and City of Morro Bay LCPs have been certified by the Commission but have not been incorporated into the CCMP.

III. Federal Agency's Consistency Determination. The Environmental Protection Agency has determined the plan consistent to the maximum extent practicable with the California Coastal Management Program.

IV. Staff Recommendation. The staff recommends that the Commission adopt the following motion:

MOTION: **I move that the Commission agree with consistency determination CD-12-00 that the plan described therein is fully consistent, and thus is consistent to the maximum extent practicable, with the enforceable policies of the California Coastal Management Program (CCMP).**

STAFF RECOMMENDATION:

Staff recommends a ***YES*** *vote on the motion. Passage of this motion will result in an agreement with the determination and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.*

RESOLUTION TO AGREE WITH CONSISTENCY DETERMINATION:

The Commission hereby agrees with the consistency determination by the Environmental Protection Agency, on the grounds that the plan described therein is fully consistent, and thus is consistent to the maximum extent practicable, with the enforceable policies of the CCMP.

V. Findings and Declarations:

The Commission finds and declares as follows:

1. Environmentally Sensitive Habitat, Wetlands, Marine Resources. The Coastal Act provides:

> *30230: Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*
>
> *30231: The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*
>
> *Section 30233(a). The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to … [eight specified uses].*
>
> *Section 30240. (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*
>
> *(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to*

> *prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

The Morro Bay estuary encompasses approximately 2,300 acres of mudflats, eelgrass beds, tidal wetlands, and open water. The entire watershed totals 48,000 acres, and includes the Chorro Creek drainage (27,000 acres) and Los Osos Creek drainage (17,000 acres). Morro Bay supports the most significant wetland system on California's south central coast. The estuary is an essential link in the Pacific Flyway, providing one of the state's largest waterfowl habitats south of San Francisco. It supports a rich eelgrass resource and provides habitat for a number of endangered and/or threatened species, including: steelhead trout, California red-legged frog, tidewater goby, Morro Bay kangaroo rat, southern sea otter, and western snowy plover.

The Morro Bay estuary and its various habitats are threatened by a large number of disturbances from human activities. To help protect these resources, the Plan designates six issues as top priority concerns: sedimentation, bacterial contamination, nutrient enrichment and dissolved oxygen, heavy metals and toxics, freshwater flow, and habitat loss. The following discussion (taken from the NEP's "Base Programs Analysis") elaborates on these concerns:

> *<u>Sedimentation</u> - Erosion in the watershed and sedimentation in the estuary are the greatest threats to Morro Bay. If sediment deposition in the estuary continues at the present rate, the health of the estuary is in severe jeopardy. Under normal conditions, an estuary and lagoon such as Morro Bay, could have a life measured in thousands of years (USDA/SCS, 1989a). However, if there is no abatement of sediment deliveries to the estuary, its life expectancy is likely limited to approximately 300 years (Haltiner, 1988), with parts of the southern section of the bay disappearing much sooner. The economic and environmental impact of this loss would be severe.*
>
> *<u>Bacteria</u>*
> *Elevated levels of bacteria present a potential health threat to those who utilize the bay for recreational purposes and economic threats to those who depend upon the resources of the bay for their livelihood. Elevated levels of bacteria are an indication that other pollutants, such as pathogens and viruses, may be present.*
>
> *Bacteria levels in Morro Bay have increased noticeably since 1993. The increased levels have already impacted shellfish growing operations. Rising levels of bacteria could adversely impact recreational uses of the bay. These pollutants can have adverse effects on humans and many marine species who utilize the bay..*
>
> *<u>Nutrients</u> - Sediment and fertilizer runoff from agricultural land contains significant amounts of nitrogen and phosphorus as well as organic matter. Nutrients are also added by animal waste runoff into water ways. Other nutrient sources include the wastewater discharge at the California Men's*

Colony treatment plant and septic systems in Los Osos and Baywood Park. These increased nutrient additions to the creeks and estuary can result in increased algal growth and reduced levels of dissolved oxygen in the water. The reduced oxygen contents can adversely affect aquatic organisms, particularly fish. This problem may increase as grazing lands are converted to higher intensity agriculture and in sections of the watershed, to horse operations and residential parcels.

Heavy Metals and Other Toxins - Inactive mines in the upper watershed have resulted in high levels of heavy metals, particularly nickel and chromium, being found associated with sediments eroding from these areas. Mine tailings and dredging spoils have been used for years in the upper watershed as fill and as road surface material. Dust from this soil may present a risk for those frequently exposed to it, as nickel is a lung carcinogen. Neither nickel nor chromium have been detected in significant quantities in surface waters; they are found primarily in association with soil particles. Their presence in sediment could impact the health of benthic fauna.

The Los Osos Landfill in the Los Osos Creek watershed may be another source of pollutants. Until early 1988, the waste dump for residential wastes, toxic materials including motor oil, pesticide containers, lubricants, and other domestic pollutants. Pollutant discharges from the landfill have not been found in surface water. However, recent studies (Engineering Science, 1987) show low level hydrocarbon contamination in two wells adjacent to the landfill. Erosion of contaminated sediment from the landfill could be a concern. For example, from major storms in 1983, portions of the buried trash were exposed and eroded by a tributary of Los Osos Creek. Monitoring of water continues in the estuary through the Bay Protection and Toxic Cleanup Program (State Water Resources Control Board, 1988).

Other potential sources of heavy metals and other toxic pollutants include urban runoff discharges from the streets of the city of Morro Bay and the Community of Los Osos, live-aboard boaters, boat painting and cleaning, and fuel docks.

Limited mussel data is [sic] available as an indicator of the bay's quality with respect to metals and organics. These data do, however, indicate that a potential for problems exists in Morro Bay. Efforts are needed to prevent one-time occurrences of toxic concentrations from becoming chronic problems.

Reduced Fresh Water Flows The Morro Bay watershed is the source of drinking water for the communities of Los Osos (population about 16,000), the California Men's Colony (population about 6-8,000), and the city of Morro Bay (population about 10,000). At present, groundwater recharge of aquifers comes from the same sources that bring fresh water to the estuary,

and increases in ground and surface water diversion directly affect the flow of creeks, the number of flow days, and wildlife and botanic values associated with a fresh water supply. Fresh water flows from the two main creeks (a third was diverted from the bay in the 1940's) entering the bay have been reduced, and at times completely interrupted, through a combination of agricultural and urban uses.

Effluent from septic tanks recharges the upper portion of the sand dunes in Los Osos, and some of this water probably returns to the estuary through springs. The amount of flow of these springs controls the boundary and vitality of fresh and brackish water ecosystems surrounding the estuary, and these may be affected as changes in effluent disposal are implemented in Los Osos. Such changes are being mandated by the Basin Plan of the Regional Water Quality Control Board, which will require an end to septic tank effluent disposal in Los Osos, and the diversion of effluent to a central treatment plant and disposal site. Such changes may have a significant effect on the estuary's ecosystems.

<u>Habitat Loss</u> - Impacts to wetlands around the bay are closely linked to sedimentation. Seasonal runoff of fresh water produces measurable turbidity in mid-estuary zones (eelgrass), the duration of which is significantly longer in a simple flow system like a mature river (Phillips, 1984). Increased turbidity leads to decreased eelgrass growth, and reduces the depth range at which it will occur in the estuary. Desiccation through increased sediment accumulation is a major factor limiting the upper intertidal distribution of eelgrass. There appears to be no species succession in the eelgrass stage of the ecosystem. Eelgrass is the initial colonizer as well as the climax stage of development (Phillips, 1984).

The salt marsh and mudflats, while increasing in area at the estuary edge, does so at the expense of the eelgrass beds and deep water zones. With increased sedimentation, salt marsh habitat is being replaced in the upper delta by lower-salinity tolerant species. These include the introduced and extremely invasive Hoary Cress (<u>Cardaria</u> <u>draba</u>). Habitat quality at this expanding interface has been severely degraded (Cicero, 1991). Also invasive in riparian woodlands adjacent to the delta is German Ivy, again probably exacerbated by disturbed soils resulting from sedimentation.

These impacts and issues are systematically and comprehensively analyzed and addressed in the 67 “actions items” (Exhibit 6) presented in the Plan. These actions items are specifically oriented towards protecting and restoring, where feasible, the health and biological diversity of the Morro Bay estuary and its watershed. The action items include such measures as land acquisitions, development of Best Management Practices (BMPs) and Total Maximum Daily Loads (TMDLs), restoration and revegetation efforts, sediment traps, fire management plans, grazing and other agricultural management plans, technical and financial assistance to various

landowners to modify land use practices and implement best management practices, improved water quality treatment, removal of nuisances, support for water reclamation, improved public access, and various inventorying, mapping, public education, and public outreach efforts.

Along with the action items are detailed implementation programs and strategies for each (see Exhibit 9 for representative samples). The Commission applauds these efforts and believes they constitute a strong, long-term commitment to resource protection. Implementation necessarily involves multi-agency and citizen efforts, including significant efforts by the Coastal Commission itself. The Commission is a working partner in these efforts and is committed to continuing to support this model watershed approach. The Commission will continue to be involved in the plan and use its available regulatory authorities to implement the plan to the extent possible, as well as to help provide continuing staff resources to assist others agencies and involved citizens interested in and motivated to achieving the plan's goals. Implementation of the plan's provisions in the county area will be considered in the Periodic Review of the San Luis Obispo County LCP currently being undertaken by the Commission. The Commission believes the plan serves as a model for comprehensive resource planning and protection, and the Commission concludes that the plan is consistent with the applicable Coastal Act policies because it will protect and enhance marine, estuarine, and wetland resources, environmentally sensitive habitat, and water quality, will protect and enhance commercial and recreational fishing, and will improve public access and recreation opportunities in this important coastal region. The Commission therefore finds the proposed Plan consistent with Sections 30210-30214, 30220, 30224, 30233, 30234, 30234.5, and 30240 of the Coastal Act.

2. <u>Commercial and Recreational Fishing</u>. The Coastal Act provides:

> *<u>Section 30234</u>. Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.*
>
> *<u>Section 30234.5</u>. The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.*

Along with the extensive biologically valuable natural resources (discussed in the previous section of this report) associated with the Morro Bay estuary and watershed, the resources support extensive commercial and recreational fishing, oyster farming, and other recreational and tourist-oriented activities that depend on the health of the wildlife. Because of its small, relatively rural nature, which is dependent on tourism, the economic health of the Morro Bay region is inextricably linked to the protection of its wildlife resources. The Bay supports a small marina, campground, natural history museum, restaurants, public boat-launch ramps,

sportfishing facilities, boat repair yard, and marine hardware stores. At least 180 commercial and sport fishing boats and 350 small recreational boats regularly use the harbor, and at least 200 boats from other harbors around the state land fish at Morro Bay. According to past Commission consistency reviews (CC-123-98), the following commercially and recreationally valuable fish species are found in Morro Bay:

> *… in the Morro Bay/Estero Bay area, sandy bottom fishes include various members of the orders Pleuronectiformes (flatfish), Squaliformes (sharks) and Rejiformes (sharks and rays). A variety of commercial and sport fish are found in the vicinity of the Morro Bay-Cayucos WWTP discharge area. Commercial catches from the Morro Bay area are typically dominated by rockfish (Sebastes spp.), albacore tuna (Thunnus alalunya), California halibut (Paralichthys californicus) and the red abalone (Haliotis rufescens). Catches from sport fishing (i.e. recreational party boat, pier, and shore fishermen) include rockfish, a variety of flatfish (Bothidae and Pleuronectidae), lingcod (Ophiodon elongatus), bocaccio (Sebastes paucispinis), cabezon (Scorpaenichthys marmoratus), pacific staghorn sculpin (Leptocottus armatus), various surfperch (Embiotocidae), white croaker (Genyonemus lineatus), queenfish (Seriphus politus), jacksmelt (Atherinopsis californiensis) and occasionally striped bass (Roccus saxatilis). Recreational harvesting for the Pismo clam (Tivela stultorum) and several other bivalve species has been conducted in the past along Atascadero State Beach north of Morro Rock.*

For the reasons discussed in the previous section, in which the Commission determined that the Comprehensive Conservation Management Plan's extensive action items and implementation programs are designed to protect and restore water quality and the wildlife values of the watershed, the proposed Plan's efforts to protect these resources would similarly protect, and improve where feasible, commercial and recreational fishing and aquaculture. The Commission therefore finds the Plan consistent with Sections 30234 and 30234.5, as well as with the other recreation and access policies, of the Coastal Act.

3. Related Commission Action. On October 11, 1994, the Commission concurred with EPA's Consistency Determination for another Comprehensive Conservation Management Plan, the Santa Monica Bay Restoration Plan (CD-83-94). Like the current proposal, that plan was also developed under the National Estuary Program and similarly addressed comprehensive watershed habitat and water quality needs. The Commission found the plan supportive of and consistent with the applicable Coastal Act policies.

VI. SUBSTANTIVE FILE DOCUMENTS:

1. Base Programs Analysis For The Morro Bay National Estuary Program National Estuary Program Comprehensive Conservation Management Plan, RWQCB/CCC, December 1998.

2. Turning the Tide for Morro Bay, Draft Comprehensive Conservation and Management Plan for Morro Bay, Morro Bay NEP, The Bay Foundation of Morro Bay, Central Coast RWQCB, EPA Region IX, August 1999.

3. Consistency Determination CD-83-94, EPA, Santa Monica Bay Restoration Plan.

4. Consistency Certification No. CC-123-98, Secondary Treatment Waiver, City of Morro Bay and Cayucos Sanitary District.

5. Environmental Assessment, Maintenance Dredging at Morro Bay Harbor, U.S. Army Corps of Engineers, August 1997.